to simply assume that such conspiracies are occurring, particularly in light of evidence to the contrary. In fact, the evidence clearly shows that many vertically integrated program networks make their products available to MMDS and HSD third-party distributors.

a) Home Satellite Dishes

Individuals associated with the home satellite dish industry have claimed that encoded satellite cable programming is unavailable or available only at excessive cost to home satellite dish programming distributors. A list of distributors of satellite programs recently compiled by the Satellite Broadcasting and Communications Association (SBCA) clearly contradicts this claim. Satellite that there are currently many satellite channels available, a number of competing third-party packagers, and a range of prices which in some cases are substantially lower than cable service. It appears that the HSD owner now has access to an attractive selection of programming.

b) MMDS Systems

The MMDS operators are another group that have claimed that cable programming is not available to them. Table III in the Appendix lists each operating MMDS system, the programming it carries, the principal cable operator

⁵³SBCA Home Satellite Subscription Information, February 1989.

b4 Home satellite dish owners not only enjoy much the same range of services as cable subscribers, but they may also enjoy lower prices. For example, comparison of "Showtime Satellite Network" published prices with the average prices paid by cable subscribers as compiled by market researcher Paul Kagan Associates indicates that HSD owners pay monthly prices that are 28 percent below cable subscribers. (Paul Kagan Associates, <u>Cable TV Investor</u>, November 29, 1988, p. 9. Average rate for Showtime from Paul Kagan Associates, <u>Census of Cable and Pay TV</u>, data as of December 31, 1987.)

in each MMDS area, the MSO which owns the principal cable system, and the vertically integrated satellite networks associated with that MSO. By examining this table it can be seen, first, that in many cases the MMDS is not competing with an MSO having any vertical links to program sources. Secondly, vertically integrated MSOs have not prevented even directly competing MMDS systems from getting programming. Forty two cable networks, including all of the top 10 and 22 of the top 28 that we have statistically analyzed in this study, are currently provided to MMDS systems. 55 Many of these programming networks have an ownership connection with MSOs, and in some cases they are offered to MMDS systems in the very areas where the parent MSO holds the local area franchise. For example, the MMDS system in Washington, D.C., Wireless Cable of Greater Washington, offers BET and will soon offer the Discovery Channel, two networks in which parent companies of the principal local cable system (TCI) has an ownership interest. Likewise, the MMDS system serving Billings, Montana, TV3, carries two networks (SuperStation TBS and Discovery) for which the parent company of the local cable system (again, TCI) holds an equity interest. This is clear evidence that the MSOs are not arbitrarily withholding their programming from competing delivery systems and, instead, see MMDS systems as another outlet for their programming product.

⁵⁵See Table III in Appendix.

III. CONCLUSION

Although consumers still spend most of their television viewing time watching broadcast television, the cable companies have successfully won a place in the market. This has occurred largely because of the extra basic and premium programming networks the cable companies offer. Since programming networks were and continue to be crucial to the success of cable, the cable companies have correspondingly been willing to invest in them. Cable operators have been instrumental in the establishment and preservation of important cable networks. 56 The result is an increased availability of programming options to the television consumer.

Against this obvious benefit from vertical integration of cable operators into programming, it is not necessary to trade off any anticompetitive effects. Vertically integrated cable operators are not discriminating against carrying programs in which they do not have an ownership interest and generally carry more of the popular programming alternatives for consumers than nonintegrated cable operators. Cable system ownership is not a barrier to entry into the cable programming market. Further, cable programmers have generally made their networks available to alternative delivery systems. The availability of cable programming is not a barrier to entry into the video delivery market.

Any anticompetitive vertical and horizontal market concentration that may develop in the future in the cable industry can be addressed by the active

⁵⁶The cable companies spent over one-half billion dollars on license fees alone for basic services in 1988. Paul Kagan Associates, <u>Cable TV Programming</u>, November 30, 1988.

enforcement of our existing antitrust law. Every trade practice complaint, every proposed merger and every contract between program producers, cable networks and cable systems potentially falls within the purview of existing law. The enforcement agencies and the Federal courts have years of experience in evaluating the competitive effects of business practices under the existing law -- and this experience can be applied to the cable industry. ⁵⁷ To outlaw a potentially efficiency enhancing form of ownership only because there is a chance that it might lead to an illegal conspiracy is unnecessary.

Besides being unnecessary, cable specific regulation carries with it the hazard of crippling an industry just now beginning to show its true potential to serve the public. Basic subscribers have risen over ten-fold in the last 20 years and almost four-fold in the last 10. For most subscribers, cable is relatively new. In any new industry there is a competitive evolutionary search for the best form of commercial organization. Through this search, via a combination of business intuition, analysis, and entrepreneurial initiative and trial and error, the more efficient forms of organization are discovered. To abort this progress through legislation restricting vertical ownership links among MSO and cable network programmers, links which have obviously benefitted consumers in terms of the increased availability of cable networks, is unnecessary for the promotion of competition and carries the risk of stagnating an otherwise vibrant industry.

⁵⁷For example, the "essential facility" doctrine of the antitrust laws may be employed if a monopolist is denying a potential competitor the use of a facility (such as a satellite network) which is essential to competition. See Otter Tail Power Co. v. U.S., 410 U.S. 366 (1973).

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APPENDIX

DATA SOURCES FOR NATIONAL CABLE PROGRAMMING SERVICES

A. Services with No Cable Operator Ownership/Equity

<u>Service</u>	Data Source
ACTS Satellite Network	Multichannel News, March 20, 1989, p. 4
Alternate View Network	Cablevision, March 13, 1989, p. 52
American's Value Network	Cablevision, February 29, 1988, p. S14
Cable Video Store	Cable Video Store Press Release
CBN Family Channel	CBN Factsheet ·
Country Music Television	Cable Television Business, February 1, 1988, p. 24
The Disney Channel	Cablevision, March 13, 1989, p. 74
ESPN (Entertainment & Sports Programming Network)	ESPN Factsheet
EWTN (Eternal Word Television Network)	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-7
Family Guide Network	Cablevision, March 13, 1989, p. 60
FamilyNet (formerly Liberty Broadcasting Network)	Cablevision, March 13, 1989, p. 60
Financial News Network (FNN)	Cable TV Programming, December 19, 1988, p. 2
FNN/SCORE	Cable TV Programming, December 19, 1988, p. 2
FNN/TelShop	Cable TV Programming, December 19, 1988, p. 2
Galavision/ECO	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-7
Hit Video USA	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-7
Home Shopping Network I	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-7
The Inspirational Network	The Washington Post, December 31, 1988, p. 86
International Television Network	Cablevision, February 29, 1988, p. S22

DATA SOURCES FOR NATIONAL CABLE PROGRAMMING SERVICES (Continued)

A. Services with No Cable Operator Ownership/Equity (Continued)

Service	Data Source
KTLA	Television & Cable Factbook; Stations Volume No. 57 (1989)
KTVT	Television & Cable Factbook; Stations Volume No. 57 (1989)
The Learning Channel (TLC)	Multichannel News, December 12, 1988, p. 52
TNN (The Nashville Network)	The Nashville Network Factsheet
National Jewish Television	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-8
The Playboy Channel	Cablevision, March 13, 1989, p. 75
The Silent Network	Cablevision, March 13, 1989, p. 64
TBN (Trinity Broadcasting Network)	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-8
Univision (formerly SIN Television Network)	Univision Factsheet
USA Network	USA Network Factsheet
The Weather Channel	The Weather Channel Factsheet
WGN	Television & Cable Factbook, Stations Volume No. 57 (1989)
WPIX	Television & Cable Factbook, Stations Volume No. 57 (1989)
WSBK	Television & Cable Factbook, Stations Volume No. 57 (1989)
WWOR .	Television & Cable Factbook, Stations Volume No. 57 (1989)
Zap Movies (formerly Telstar)	Cablevision, March 13, 1989, p. 80

DATA SOURCES FOR NATIONAL CABLE PROGRAMMING SERVICES (Continued)

B. Services with Cable Operator Ownership/Equity

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<u>Service</u>	Data Source
A&E Cable Network (Arts & Entertainment)	Arts & Entertainment Factsheet, Television Critics Association, National Cable Forum, January 1989
AMC (American Movie Classics)	Broadcasting, December 26, 1988, p. 27, Multichannel News, December 26, 1988, p. 1
BET (Black Entertainment Television)	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-6
Bravo	Bravo Factsheet, Television Critics Association, National Cable Forum, January 1989
CNN (Cable News Network)	Cable Television Business, February 1, 1988, Donaldson Lufkin Jenerette Action Recommendation on Turner Broadcasting Systems Inc., March 2, 1988, p. 29, The Wall Street Journal, January 23, 1987, p. 5, Broadcasting, June 8, 1987, p. 32, Donaldson Lufkin Jenerette Action Recommendation, E. W. Scripps, September 14, 1988, p. 10
C-SPAN I	Multichannel News, January 11, 1988, p. 16
C-SPAN II	Multichannel News, January 11, 1988, p. 16
Cable Value Network	Multichannel News, November 7, 1988, p. 4, Cable Television Business, February 1, 1988, pp. 22-25, ATC 1987 Annual Report, p. 17, Broadcasting, November 23, 1987, p. 42
Cinemax	Cablevision, March 13, 1989, p. 74
The Discovery Channel	The Wall Street Journal, February 27, 1989, p. 84
The Fashion Channel (TFC)	Multichannel News, August 22, 1988, p. 1, Cable TV Business, February 1, 1988, pp. 22-25, Broadcasting, November 23, 1987, pp. 40-42 and pp. 66-68, ATC 1987 Annual Report

Cablevision, March 13, 1989, p. 74

HBO

DATA SOURCES FOR NATIONAL CABLE PROGRAMMING SERVICES (Continued)

B. <u>Services with Cable Operator Ownership/Equity</u> (Continued)

Service	<u>Data Source</u>
Headline News	Cable Television Business, February 1, 1988, Donaldson Lufkin Jenerette Action Recommendation on Turner Broadcasting Systems Inc., March 2, 1988, p. 29, The Wall Street Journal, January 23, 1987, p. 5, Broadcasting, June 8, 1987, p. 32, Donaldson Lufkin Jenerette Action Recommendation, E. W. Scripps, September 14, 1988, p. 10
Lifetime	Lifetime Fact Sheet
Mind Extension University	Jones Intercable 1988 Annual Report
MTV	MTV Network Factsheet, Television Critics Association, National Cable Forum, January 1989
The Movie Channel	Showtime Network Inc. Factsheet, Television Critics Association, National Cable Forum, January 1989
Movietime	Broadcasting, March 14, 1988, p. 57, and Movietime Factsheet
Nickelodeon	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-8
NICK at Nite	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-8
The Nostalgia Channel	Cable TV Programming, December 15, 1987, p. 9
QVC Network	Cable TV Business, February 1, 1988, pp. 22-25, United 1987 Annual Report, p. 12
Request Television 1	The Pay TV Newsletter, May 29, 1987, p, United 1987 Annual Report, p. 12, Multichannel News, January 25, 1988, p. 3, Request Fact Sheet
Request Television 2	The Pay TV Newsletter, May 29, 1987, p, United 1987 Annual Report, p. 12, Multichannel News, January 25, 1988, p. 3, Request Fact Sheet
Shop Television Network	Multichannel News, March 13, 1989, p. 38, Broadcasting, November 23, 1987, p. 42

DATA SOURCES FOR NATIONAL CABLE PROGRAMMING SERVICES (Continued)

B. <u>Services with Cable Operator Ownership/Equity</u> (Continued)

<u>Service</u>	<u>Data Source</u>
Showtime	Showtime Network Inc. Factsheet, Television Critics Association, National Cable Forum, January 1989
SuperStation TBS	Cable Television Business, February 1, 1988, Donaldson Lufkin Jenerette Action Recommendation on Turner Broadcasting Systems Inc., March 2, 1988, p. 29, The Wall Street Journal, January 23, 1987, p. 5, Broadcasting, June 8, 1987, p. 32, Donaldson Lufkin Jenerette Action Recommendation, E. W. Scripps, September 14, 1988, p. 10
TNT (Turner Network Television)	Cable Television Business, February 1, 1988, Donaldson Lufkin Jenerette Action Recommendation on Turner Broadcasting Systems Inc., March 2, 1988, p. 29, The Wall Street Journal, January 23, 1987, p. 5, Broadcasting, June 8, 1987, p. 32, Donaldson Lufkin Jenerette Action Recommendation, E. W. Scripps, September 14, 1988, p. 10
The Travel Channel	Multichannel News, February 1, 1988, p. 8, Multichannel News, October 17, 1988, p. 30
VH-1	Warren Publishing, <u>1988 Television and Cable Factbook</u> , Cable & Services Volume, p. C-9
Viewers Choice 1	The Pay TV Newsletter, November 23, 1988, p. 1
Viewers Choice 2	The Pay TV Newsletter, November 23, 1988, p. 1
VISN (Vision Interfaith Satellite Network)	Vision Interfaith Satellite Network Factsheet, Broadcasting, December 14, 1987, p. 84, Multichannel News, February 13, 1989, p. 16

Table II

REGRESSION ANALYSIS OF THE RELATIONSHIP BETWEEN PROGRAM DIVERSITY AND THE DEGREE OF VERTICAL INTEGRATION ACROSS SYSTEMS

Dependent Variable = Number of Basic and Premium Networks Offered by a Cable System

<u>Independent Variable</u>	Regression <u>Coefficient</u>	<u>T-statistic</u>
Channel Capacity (0-36)	.482	10.7
Channel Capacity (37-54)	.167	8.4
Channel Capacity (55-126)	.069	4.0
Number of Cable Networks with an Ownership Interest	.358	8.1
Constant	1.022	0.7
\overline{R}^2	.487	

<u>Dependent Variable = Number of Basic</u> <u>Networks Offered by a Cable System</u>

Independent Variable	Regression Coefficient	<u>T-statistic</u>
Channel Capacity (0-36)	.377	9.8
Channel Capacity (37-54)	.107	6.4
Channel Capacity (55-126)	.040	2.8
Number of Basic Networks with an Ownership Interest	.315	7.0
Constant	.611	0.5
₹2	. 400	

<u>Dependent Variable = Number of Premium</u> <u>Networks Offered by a Cable System</u>

Regression <u>Coefficient</u>	<u>T-statistic</u>
.105	6.1
.057	7.5
.030	4.6
.277	3.4
. 574	1.0
.343	
	.105 .057 .030 .277 .574

Table III

CABLE NETWORKS OFFERED BY MMDS SYSTEMS

	Location Mobile, AL	MMDS System AT&I Mobile	Networks Offered Select TV	Competing Cable System/MSO Comcast	Major Networks Owned by Local MSO Operators None
			CNN Headline WGN SuperStation TBS	Cablevision/ Comcast	
	San Francisco, CA	Premier Communication	HBO Showtime ESPN CNN SuperStation TBS Arts & Entertainment USA Network WGN WWOR VH-1 The Discovery Channel Financial News Network C-SPAN	Viacom Cablevision of San Francisco/ Viacom	Lifetime MTV Nick at Nite Nickelodeon VH1 Showtime The Movie Channel CNN CNN/Headline Cable Value Network SuperStation TBS
<u>}</u>	San Luis Obispo, CA	AT&I San Luis Obispo (temporarily shut down)	Select TV CNN Headline WGN SuperStation TBS	Sonic Cable TV of San Luis Obispo/Sonic	None
	Sacramento. CA	People's Choice	CNN USA Network Nickelodeon VH-1 Arts & Entertainment (expected) Lifetime Starion Discovery Channel	Sacramento Cable/Scripps Howard	CNN SuperStation TBS CNN/Headline
	Washington. D.C.		HBO ESPN Showtime (wider distribution 7/89) Discovery Channel (6/89) Nickelodeon (6/89) BET FNN (6/89) CBN (9/89) MTV (6/89) Arts & Entertainment (7/89)	District Cablevision/ TCI (20%); United Cable (10%); Bob Johnson and local investors (70%)	CNN SuperStation TBS The Discovery Channel BET CNN/Headline Cable Value Network American Movie Classics

	Location Washington, D.C. (continued)	MMDS System	Networks Offered USA Network (7/89) Lifetime (7/89) C-SPAN I (8/89) C-SPAN II (8/89) Disney Channel (9/89) WWOR (9/89) WGN (9/89) SuperStation TBS (9/89) Home Team Sports CNN (8/89)	Competing Cable System/MSO	Major Networks Owned by Local MSO Operators
	Denver, CO	TV Communications Network (TVCN)	CNN SuperStation TBS WWOR Starion (4/89) Learning Channel (expected) FNN (expected) MTV (expected) Discovery Channel (expected) Nickelodeon (expected) CBN (expected) WGN (expected) USAN (expected)	Mile Hi Cablevision/ ATC; TCI; Daniels & Associates	CNN SuperStation TBS The Discovery Channel BET CNN/Headline American Movie Classics Cinemax HBO CVN
•	Waterloo, IA	TV Five	WGN WPIX WTBS Starion	Waterloo Cablevision/ McDonald Group	None
•	Salina, KS	AT&I Salina (temporarily shut down)	SelecTV CNN/Headline WGN SuperStation TBS	Salina Cable TV/ Communications Services (CSI management-80%; TCI-20%)	CNN SuperStation TBS Discovery BET CVN CNN/Headline American Movie Classics

		(Continued)		Major Networks
Location	MMDS System	Networks Offered	Competing Cable System/MSO	Owned by Local MSO Operators
Detroit, MI	Wireless Cable of Michigan	HBO CBN Family Channel SuperStation TBS MTV CNN/Headline ESPN BET	Barden Cablevision/ Barden Communications (40.8%); McLean Hunter (49%); Cable Investment of Detroit (10.2%)	None
St. Louis, MO	People's Choice	Starion WGN SuperStation TBS CNN ESPN WWOR Discovery Channel USAN The Learning Channel VH-1 International Network CBN Showtime TNN	St. Louis Cablevision/ TCI; City Cable Communications/ William T. Johnson	CNN SuperStation TBS The Discovery Channel BET Cable Value Network CNN/Headline American Movie Classics
Billings, MT	TV 3	Starion CBN Family Network The Discovery Channel WGN SuperStation TBS	TCI Cablevision/ TCI	CNN SuperStation TBS The Discovery Channel BET Cable Value Network CNN/Headline American Movie Classics
Las Cruces, NM	TV West	CBN Family Network TNN USAN CNN MTV Nickelodeon SuperStation TBS Starion	Las Cruces/TV Cable/Westcom	None

Location Deming, NM Silver City,	MMDS System Rural TV Systems (RTS) Rural TV	Networks Offered WWOR WGN SuperStation TBS CBN Family Channel TNN Starion	Competing Cable System/MSO Sun Cable TV/ Mikelson Media Century New	Major Networks Owned by Local MSO Operators None
NM	Systems	WWOR WGN SuperStation TBS CBN Family Channel	Mexico/Century Communications	
Albany-Troy, NY	Capital Wireless Corp.	CNN MTV FNN/SCORE Nickelodeon American Movie Classics CBN Family Network Lifetime Disney SuperStation TBS Starion USAN WWOR C-SPAN Discovery Channel Arts & Entertainment Travel Channel Local PBS Local Affiliates	AlbanyCapital Cablevision/ ATC TroyTroy NewChannels/ Newhouse Schenectity TCI of New York/TCI	CNN SuperStation TBS CNN/Headline CVN BET HBO Cinemax Discovery Channel
New York, NY	Wireless Cable of New York	HBO MSG Network SuperStation TBS MTV Nickelodeon ESPN Playboy USAN Showtime Disney Learning Channel BET Discovery Channel Also carry off-air broadcast signals	Brooklyn Cablevision Systems/ Cablevision Systems Corp. Brooklyn/ Queens Brooklyn Queens Cable/Warner Manhattan (Northern Portions) Paragon Communications (ATC; Houston Industries)	CNN SuperStation TBS CNN/Headline CVN AMC BRVO CMAX HBO

		(Continued)		Major Networks
<u>Location</u>	MMDS System	Networks Offered	Competing Cable System/MSO	
New York, NY (continued)			BronxCATV Enterprises Inc./Theodore Branick Estate (51%); Westinghouse Broadcasting (49%) Manhattan Manhattan Cable TV/ATC Queens (Southern Portion) Queens Inter Unity Cable/ Percy Sutton; Unity Broadcasting Network; Warner Cable (100% jointly) Queens (Northwest Portion) American Cablevision of Queens/ATC	
Cleveland, OH	MetroTEN	HBO MTV ESPN SuperStation TBS WWOR CNN/Headline CBN Family Channel TNN Showtime BET Nickelodeon WGN Univision C-SPAN Sports Channel America Disney USA Network Discovery Channel	North Coast Cable/managed by Viacom; Viacom Cablevision/ Viacom	CNN SuperStation TBS MTV Nickelodeon Lifetime Nick @ Nite CNN/Headline VHI CVN Showtime The Movie Channel

Location	MMDS System	Networks Offered	Competing Cable System/MSO	Major Networks Owned by Local MSO Operators
San Juan, PR	Telecable of Puerto Rico	CNN/Headline WPIX WWOR WGN ESPN SuperStation TBS WABC, NY (ABC) WBBM, Chicago (CBS) WXIA, Atlanta (NBC) CNN CVN Disney Channel MTV Nickelodeon The Discovery Channel Electronic Program Guide	Century ML Cable/Century Communications (50%); Multivision (50%)	None
Mitchell, SD	Family Entertainment Network	Showtime SuperStation TBS WGN TNN Nickelodeon CNN CBN ESPN	Mitchell Cable TV/Souix Falls Cable TV (Mid Continent Cable50%; TCI50%)	CNN SuperStation TBS Discovery Channel CNN/Headline BET CVN American Movie Classics
Houston, TX	People's Choice	Starion (SDUs only) TNN Showtime (1 complex only) WGN SuperStation TBS WWOR Disney USAN ESPN CNN	Warner Cable/ Warner; Houston Community Cablevision/ Storer	CNN SuperStation TBS CNN/Headline CVN

	Location	MMDS System	Networks Offered	Competing Cable System/MSO	Major Networks Owned by Local MSO Operators
	Milwaukee, WI	People's Choice (also known as Milwaukee Entertainment Television)	HBO Showtime (Milwaukee only) Playboy AMC (part of basic) MTV WGN SuperStation TBS WWOR ESPN The Learning Channel CNN Local Off-air Stations Access Programming	Warner Cable/ Warner (35%); Milwaukee Cable Co. Inc. L.P. (65%)	CNN SuperStation TBS CNN/Headline CVN
•	Dallas, TX	People's Choice	Starion WGN ESPN CNN Superstation TBS TNN USAN Disney WWOR Showtime	Heritage Cablevision/ Heritage Communication	CNN CVN SuperStation TBS TNT CNN Headline

Table III

CABLE NETWORKS OFFERED BY MMDS SYSTEMS (Continued)

<u>Location</u>	MMDS System	Networks Offered	Competing Cable System/MSO	Major Networks Owned by Local MSO Operators
Minneapolis, MN	People's Choice	Starion TNN Showtime WGN SuperStation TBS WWOR Disney USAN CBN Family ESPN CNN CNN/Headline MTV Nickelodeon The Movie Channel Country Music TV Inspirational Network Local Broadcast Stations	Rogers Minneapolis Cable System/ Rogers	CVN

Source: Information obtained from telephone survey of MMDS systems, May, 1989.

Resume

BENJAMIN KLEIN

Personal

Born 1943 in New York, N.Y.; married, two children.

Education

Ph.D., Economics, 1970 University of Chicago M.A., Economics, 1967, University of Chicago. B.A., <u>cum laude</u>, Philosophy, 1964, Brooklyn College, CUNY.

Employment

Professor of Economics, University of California, Los Angeles, 1978-present. (Associate Professor, 1973-78; Assistant Professor, 1968-72.)

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President, Economic Analysis Corporation, 1980-present. 2049 Century Park East, Suite 1040 Los Angeles, California 90067 (213) 556-0709

Member, Board of Directors, Pilgrim Group of Mutual Funds, 1985-present.

Vice Chairman, Director of Graduate Studies, University of California, Los Angeles, 1981-82, 1987-.

Economics Director, University of California, Los Angeles joint degree in law and economics program, 1977-81.

Law and Economics Fellow, University of Chicago Law School, Fall 1979.

Visiting Professor, University of Washington, Spring 1979.

Research Associate, National Bureau of Economic Research, 1976-77.

Law and Economics Fellow, University of Chicago Law School, 1975-76.

Faculty Research Fellow, National Bureau of Economic Research, New York, 1971-72.

Economist, Executive Office of the President, Bureau of the Budget, Washington, D.C., Summer, 1966.

Fields of Concentration

Industrial Organization; Antitrust Policy; Law and Economics; Monetary Theory

Honors and Awards

Principal Investigator, Sloan Foundation Grant, Workshop in the Economics of Contractual Arrangements, 1981-88.

Sponsor, Earhart Foundation Fellowship, 1982-present.

University of Miami Law and Economics Center Annual Prize for Distinguished Scholarship in Law and Economics, 1978-79.

General Electric Law and Economics Fellowship, University of Chicago Law School Antitrust Project, 1978-79.

Scaiffe Foundation Law and Economics Fellowship, University of Chicago Law School, 1975-76.

Warren C. Scoville Distinguished Teaching Award, University of California, Los Angeles, Department of Economics, 1974, 1975.

Western Economic Association Annual Award for Best Article in <u>Economic Inquiry</u>, Journal of the Western Economic Association, 1975.

National Bureau of Economic Research Postdoctoral Research Fellowship, 1971-72.

Ford Foundation Dissertation Year Fellowship, University of Chicago, 1967-68.

University Fellowship, University of Chicago, 1965-67.

Professional Activities

Consultant: Federal Trade Commission, Bureau of Competition, 1983-86, 1988-.

Federal Trade Commission, Bureau of Consumer Protection, 1982-83.

Federal Trade Commission, evaluation of antitrust activity with regard to vertical distribution restrictions, 1976-80.

Various corporations and attorneys-at-law regarding antitrust and other commercial litigation, 1973-present.

Board of Governors of the Federal Reserve System, 1973, 1975.

Lecturer: Economics Institute for Federal Judges, Law and Economics Center, University of Miami School of Law, 1979-81.

Institute for Contemporary Studies - University of California, Los Angeles Graduate School of Management annual economics workshop for practicing antitrust attorneys, 1977-83.

Economics Institute for Law Professors, Law and Economics Center, University of Miami School of Law, 1979.

University of California, Los Angeles, Graduate School of Management executive education program, 1981.

Editorial: Board of Editors, <u>Journal of Law</u>, <u>Economics & Organization</u>; Referee for various economics and legal journals and for the National

Science Foundation.

Affiliations: American Economic Association

Western Economic Association

Trial Testimony

Mobil Oil New Zealand and Her Majesty the Queen in Right of New Zealand, Arbitral Tribunal, Case ARB/87/2, International Centre for Settlement of Investment Disputes, World Bank, Washington D.C., November 9, 1988, Auckland, New Zealand, December 9, 1988.

Fisher and Paykel Ltd. application under Section 62 of the New Zealand Commerce Act 1986. New Zealand Commerce Commission Hearing, Wellington, N.Z., August 29-September 2, 1988.

Federal Trade Commission v. Detroit Auto Dealers Association et al., Docket No. 9189, U.S. Federal Trade Commission, Washington, D.C., July 16-17, 1986. [Portions under seal]

White Consolidated Industries, Inc. et al. v. Whirlpool Corp., et al., U.S. District Court, Northern District of Ohio, Eastern Division (Cleveland), Case No. C85-472, May 28-29, 1985. [Portions under seal]

Pennzoil Co. v. Texaco, Inc. et al., U.S. District Court, Northern District of Oklahoma (Tulsa), Case No. 84-C-29-E, February 3-4, 1984.

Deposition Testimony

Cipollone v. Liggett Group, Inc. et al., U.S. District Court, District of New Jersey, Civil Action No. 83-2864 SA, July 15, 1987.

Digidyne v. Data General Corporation, U.S. District Court - Northern District of California, MDL Docket No. 369 MHP, June 17-19, 1987.

Salt Lake Auto/Truck Stop v. Union Oil of California, U.S. District Court, Central District of California Case No. 84 5772-PAR (JRx), October 21, 1986.

International Service Station Dealers Association v. Texaco, Inc. (Superior Court of the State of California, County of Los Angeles Case No. C391044, June 3, 1986). [Portions under seal]

Federal Trade Commission v. Detroit Auto Dealers Association et al., Docket/Case No. 9189, May 22, 1986 and June 11, 1986.

White Consolidated Industries, Inc. et al. v. Whirlpool Corp., et al., U.S. District Court, Northern District of Ohio, Eastern Division (Cleveland), Case No. C85-472 [April 26, 1985].

Pennzoil Co. v. Texaco, Inc. et al., U.S. District Court, Northern District of Oklahoma (Tulsa), Case No. 84-C-29-E, January 28, 1984.

Affidavits and Declarations

Affidavit: United States of America v. BNS Inc. (United States District Court for the Central District of California, Civil No. 88 01452R), April 4, 1988.

Affidavit: In the proposed merger of Goodman Fielder Limited and Wattie Industries Limited (The High Court of New Zealand, Administration Division, Wellington Registry, M264/87 and M280/87), July 29, 1987.

Declaration: Coastal Transfer Co. v. Toyota Motor Sales, U.S.A., Inc. (United States District Court, Central District of California Case No. 82-4635), November 25, 1985.

Declaration: State of California v. Texaco, Inc. et al. (Superior Court of the State of California, County of Sacramento, No. 321 706), August 20, 1984.

Affidavit: Federal Trade Commission v. Warner Communications Inc., et al. (United States District Court, Central District of California Civil No. 84-1506(R)), April 16, 1984. [under seal]

Publications

"The Use of Economic Models in Antitrust Litigation," Fraser Institute, University of Toronto Symposium on <u>Economic Competition and the Law</u>, forthcoming.

"Vertical Restraints as Contract Enforcement Mechanisms" (with Kevin M. Murphy), Journal of Law & Economics, forthcoming (October, 1988).

"Vertical Integration as Organizational Ownership: The Fisher Body-General Motors Relationship Revisited," <u>Journal of Law. Economics and Organization</u>, Vol. 4, No. 1 (Spring, 1988), pp. 199-213.

"The Economics of Geographic Market Definition" in <u>27th Annual Advanced Antitrust Seminar: Mergers, Markets and Joint Ventures</u>, Practicing Law Institute, Corporate Law and Practice, Course Handbook Series Number 581 (1987), pp. 255-276.

"An Economic Analysis of Vertical Distribution and Marketing Arrangements," in <u>Distribution and Marketing: The New Antitrust Environment</u>, Practicing Law Institute, Corporate Law and Practice, Course Handbook Series Number 511 (1986), pp. 131-144.

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